ABSTRACT

The present invention provides a simple but extremely robust encryption method and system for encrypting any type digital information consisted of any arbitrary length. A host can simultaneously maintain plurality of encrypted communication sessions with several remotes. A pre-determined number of bits located at pre-determined and specific positions within a seed arbitrary bit segment of any length determine a random sequence of mathematical or logical functions that can be used to encrypt a digital information segment. A sequence of randomly selected functions is used every time a new digital information segment consisting of any arbitrary length needs to be encrypted. The resulting encrypted information segment does not contain any indication about the plurality of functions used in its encryption process. The invention also provides unique ways of updating and modifying the encryption/decryption procedures even during the course of an on-going communication session.